

WHAT IS CLAIMED IS:

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1. A method for managing a public key in an environment having a hierarchical network with a domain name at each hierarchy, a DNS server provided at each hierarchy, for managing correspondence between said domain name and an address, and hosts accommodated in said network, said DNS server serving to distribute a public key of another host to the host belonging to said network, said DNS server having means for managing said public key and a database for storing the public key of the host belonging to said network and said domain name in a corresponding manner, comprising the step of:

when the first host issues an inquiry about the public key of the second host on the information about said domain name, prompting said means for managing said public key to refer to said database, thereby answering the information on the public key of the second host corresponding to said domain name to said first host.

2. A method for managing a public key as claimed in claim 1, wherein when said DNS server receives an inquiry of the public key of the second host from the first host, if no entry corresponding to the domain name of inquiry is found in said database of said DNS server itself, the solution of said public key is recursively entrusted to another DNS server provided

with said another means for managing a public key and the database along the hierarchy of said domain name.

3. A method for managing a public key as claimed in claim 1, wherein said host provides means for inquiring said DNS server of the public key of another host, said means serving to inquire said DNS server of the corresponding public key to the domain name of the target host when the security communication is started.

4. A storage medium characterized by including a program for executing the function of means for managing a public key provided in a DNS server, for realizing the method for managing a public key as claimed in claim 1, a database for storing a public key and a domain name of the host belonging to the network in a corresponding manner, and a program for executing a process for answering the corresponding public key to the domain name to the host by prompting said means for managing the public key to refer to said database when the inquiry of the public key is received through the information of said domain name from the host.